Using Zoom for Today’s Webinar

- All participants are muted.
- For the best quality, please leave your camera turned off.
- You can type questions into the chat panel at any time.
- If you have any technical difficulties:
  - Use the chat in the lower right corner of your screen to send a message to Chloe Durand
  - Email Chloe Durand at Durand.Chloe@epa.gov
Accessing Chat

1. Click “Chat” at any point to open the chat box to ask questions.

2. Type message and send.
Muting Audio and Video

Microphone should be muted

Video should be turned off
2020 Toxics Release Inventory
National Analysis
Overview Presentation

Caitlin S. briere
Data Analysis and Dissemination Branch - Office of Pollution Prevention and Toxics
Overview

- Introduction to TRI
- Reporting Year 2020 TRI National Analysis
- New features this year
- Live website demo
- Questions & Discussion
Why Was the Toxics Release Inventory Created?

Bhopal, India  December 1984

- Methyl isocyanate gas released at a Union Carbide chemical plant
- Thousands died the first night
- Thousands more have died due to long-term health effects
- Survivors continue to suffer with permanent disabilities

Institute, West Virginia  August 1985

- Chemical release at a similar facility in the U.S.
- Over 100 people hospitalized

Increased concern in the U.S. about chemical accident preparedness and availability of information on toxic chemical releases from industrial facilities
What is the Toxics Release Inventory (TRI)?

- TRI tracks the management of certain toxic chemicals that may pose a threat to human health and the environment.
- TRI includes information on:
  - Releases
  - Waste transfers
  - Recycling
  - Pollution prevention
  - And much more!
What is a “Release”?

A “release” refers to different ways that toxic chemicals from industrial facilities enter the:

- Air
- Water
- Land

The likelihood of residents coming into contact with toxic chemicals depends on the type of release and other factors.

For more information, see the glossary at [www.epa.gov/toxics-release-inventory-tri-program/common-tri-terms](http://www.epa.gov/toxics-release-inventory-tri-program/common-tri-terms)
Which facilities must report to TRI?

1. Facility must be in a TRI-covered industry sector or category, including:
   - Manufacturing
   - Coal/Oil electricity generation
   - Certain Mining Facilities
   - Hazardous Waste Management
   - Federal Facilities

2. Facility must have the equivalent of at least 10 full-time employees

3. Facility must manufacture, process, or otherwise use more than a certain threshold amount of a TRI-listed chemical per year
What information do facilities report to TRI?

- On-site releases of TRI chemicals to:
  - Air
  - Water
  - Land
- Transfers of chemical waste to off-site locations
- Other waste management activities:
  - Recycling
  - Treatment
  - Energy recovery
- Pollution prevention activities (www.epa.gov/tri/p2)
Considerations When Using TRI Data

- The TRI Program covers many - but not all - industry sectors and chemicals
- The quantities of TRI chemical releases reported by facilities are not necessarily an indicator of potential human health risks posed by the chemicals
- Most TRI data reflect permitted industrial releases
- TRI data do not reflect all uses of a particular chemical
- TRI-reported releases may or may not be the largest source of chemical emissions in a particular location
- TRI reporting requirements, covered chemicals, and covered industry sectors have changed over time
- New TRI data are published each July and updated several times during the year
- TRI is one of many sources of environmental data collected by EPA
- In some rare instances, a facility may not be physically located in the city listed on its TRI reporting form

For more information, see “Factors to Consider when Using TRI Data” at
https://www.epa.gov/toxics-release-inventory-tri-program/factors-consider-when-using-toxics-release-inventory-data
2020 TRI National Analysis: Key Messages

- Facilities reduced their TRI waste managed and releases since last year
  - Waste managed decreased 7%; releases decreased 10%
  - Reductions in releases outpaced reduced economic activity: manufacturing value added decreased 2% while manufacturing releases decreased 9% from 2019 to 2020
  - TRI facilities implemented 2,779 new source reduction/pollution prevention activities in 2020

- Releases of TRI chemicals to air continue to decline
  - 2019-2020: Air releases decreased by 52 million pounds (9%)
  - 2011-2020: Air releases decreased by 277 million pounds (34%)
  - Almost every sector reduced its releases of TRI chemicals to air since 2011

- New this year:
  - “Community Profiles” layer in interactive mapping tool combines TRI data with demographic information, making it easy to overlay maps of facility locations with maps of overburdened and vulnerable communities
  - Cross-border waste transfers added to data visualization dashboard
  - New profile of cement manufacturing sector; GHG info added to certain sector profiles
  - First year of TRI reporting for certain PFAS
COVID-19 Impacts

- The COVID-19 public health emergency may have affected industrial operations throughout 2020. Facilities may submit comments about their activities in their TRI reporting, and for 2020, many chose to include information about how COVID-19 impacted their operations:

- Impacts on facility-wide operations - many facilities noted COVID-19-related shutdowns or reduced operations during 2020

- Impacts on waste management activities - facilities commented on how the public health emergency changed their processes
  - A food manufacturer noted that they used more sanitizing chemical than in the past to meet COVID-related industry requirements
  - An antibacterial wipe manufacturer reported that increased demand led to an increase in their production and the associated amount of chemical waste generated

- Impacts on pollution prevention activities - an abrasive product manufacturer reported that COVID-19 resulted in less capital available to pursue source reduction projects

U.S. Environmental Protection Agency
Trends in TRI waste managed
Trends in TRI Releases

Total Disposal or Other Releases

Year


Millions of Pounds

On-site Air Releases
On-site Land Disposal
On-site Surface Water Discharges
Off-site Disposal or Other Releases
Reporting Facilities

Thousands of Facilities

0 5 10 15 20 25
A **RSEI Score** is an estimate of relative potential human health risk. It is a unitless value that accounts for the magnitude of the release quantity of a chemical, the fate and transport of the chemical throughout the environment, the size and locations of potential exposed populations, and the chemical’s inherent toxicity.
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Trends in TRI Releases to Land

On-site Land Disposal

<table>
<thead>
<tr>
<th>Year</th>
<th>Millions of pounds</th>
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<tr>
<td>2011</td>
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<td>2012</td>
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On-site Land Disposal Excluding Metal Mines

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<thead>
<tr>
<th>Year</th>
<th>Millions of Pounds</th>
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<tbody>
<tr>
<td>2011</td>
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New This Year: Community Profiles Layer
New This Year: Cross-border Transfers

- New map in the data visualization dashboard shows international waste transfers
- Select a receiving country to view facilities shipping waste there
- Color-coded arrows indicate waste management activity and relative quantity
New: Cement Manufacturing Profile

What the Sector Does
Facilities in the cement manufacturing sector produce cement, a binding agent that when mixed with water, sand, and gravel or crushed stone forms the rock-like mass known as concrete. Concrete, in turn, is used in highway, commercial, and residential construction projects.

THE SECTOR EMPLOYS 16,000 PEOPLE
U.S. Census Annual Survey of Manufactures 2019 data

THE SECTOR PRODUCES OVER 168 MILLION METRIC TONS OF CEMENT
U.S. Geological Survey 2019 data

113 facilities in the sector report to TRI
U.S. EPA TRI Reporting Year 2020

**Total Disposal or Other Releases: Cement Manufacturing**

<table>
<thead>
<tr>
<th>Year</th>
<th>Millions of Pounds</th>
<th>Cement Production (Million Metric Tons)</th>
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<tbody>
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<td>2011</td>
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- **On-site Air Releases**
- **On-site Surface Water Discharges**
- **On-site Land Disposal**
- **Off-site Disposal or Other Releases**
- **Production (million metric tons)**
New This Year: PFAS Data in TRI

Number of Facilities Reporting PFAS by Sector
- Chemical Manufacturing: 19
- Petroleum Products Manufacturing: 3
- Hazardous Waste Management: 11
- Nonmetallic Mineral Products: 3
- Computers and Electronic Products: 2

PFAS Production–Related Waste Managed
- 794,287 pounds
  - Treatment: 67%
  - Recycling: 30%
  - Disposal or Other Releases: 2%
  - Energy Recovery: 2%

PFAS Releases
- 9,133 pounds
  - On-site Land Disposal: 55%
  - Off-site Disposal or Other Releases: 30%
  - Air Emissions: 4%
  - Water Discharges: 5%
TRI National Analysis: https://www.epa.gov/trinationalanalysis

For questions and follow-up: TRI.Help@epa.gov or “Contact Us” link on the National Analysis website